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# Comparative Financial Profile of Cooperatives Handling Grain:

First-Handlers With \$1 Million or More in Sales



# **Abstract**

## **Comparative Financial Profile of Cooperatives Handling Grain:**

First-Handlers With \$1 Million or More in Sales

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This report presents comparative financial information on local cooperative associations that are first-handlers of grain, hereafter referred to as first-handlers, grain cooperatives, or as associations. These associations had annual sales in 1983-84 of at least \$1 million, with grain sales representing more than half of total value of sales. Many of the associations handled farm supplies and provided related services.

**Key words:** cooperative, financial, grain, elevators

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## Preface

This report is based on balance sheet and operating statement data collected as part of an ACS survey of 2,275 grain marketing cooperatives. Other types of information such as membership, volume of grain handled, and storage capacity were obtained from first-handler cooperatives. All information in this report is for three size groups based on total sales and four types of first-handler local associations:

### Size Groups

- Large - 155 cooperatives with \$15 million or more in sales in calendar year 1983.
- Medium - 503 cooperatives with \$5 million to \$14.9 million in sales in calendar year 1983.
- Small - 237 cooperatives with \$1 million to \$4.9 million in sales in calendar year 1984.

### Types of Cooperatives

- Corn-soybean
- Wheat-barley-oats
- Wheat-sorghum
- Wheat-barley

More than 50 percent of total sales was from grain. Most cooperatives were diversified, also handling farm supplies and providing many related services. The associations were typed for comparison on the basis of predominant grains handled—corn/soybeans (Corn Belt), wheat/sorghum (Southern Plains), wheat/barley/oats (Northern Plains) and wheat/barley (Pacific Northwest). Regardless of how grouped, the associations are not homogeneous. For example, net savings for those comparable in terms of total dollar sales can vary considerably depending on types of grains handled.

All information included is based on condensed balance sheets and operating statements. Because of variations in accounting and auditing practices and terminology, it was necessary to adjust financial reports to ensure data comparability.

The information in this report can help cooperative management and boards make sound business decisions as they confront new problems and the need for increasing amounts of capital for improved or new facilities and/or services. Such information can be used as guidelines for success and pitfalls to avoid. Using information for your own cooperative, you can compare it with others of a similar size and type (see appendix A).

This is the fourth publication in the financial profile series. The first three covered the associations with \$15 million or more total sales (ACS Research Report 53), \$5 million to \$14.9 million in sales (ACS Research Report 55), and those with \$1 million to \$4.9 million in sales (ACS Research Report 58).



## Glossary

**Current assets** - The dollar value of assets that can be readily converted into cash without interfering with the normal business operations.

**Investments** - The dollar value of investments in other business organizations, mostly cooperative associations, and deferred patronage.

**Fixed assets** - Dollar value of property, structures and equipment (less depreciation), land, construction in progress, and capital leases.

**Other assets** - All other assets such as bond cost amortization, and deferred and prepaid expenses.

**Current liabilities** - The dollar value of liabilities to be paid, including that portion of long-term debt due in a year or less and patronage refunds payable.

**Long-term liabilities** - The dollar value of all debts with a maturity of more than 1 year, such as debentures, notes, industrial revenue bonds, and mortgage notes.

**Net worth or equity capital** - The dollar value of owners' equity listed in the equity sections—includes common/capital/preferred stock, allocated/unallocated earnings, per-unit retains, and certificates of indebtedness and membership.

**Gross margins** - The dollar value of the sales of grain and farm supplies less cost of goods sold.

**Other operating income** - The dollar value of storage and handling fees, service revenue, load-out fees, cleaning, mixing, commission, drying, finance charges, etc.

**Nonoperating income** - The dollar value of net interest income/expenses, gain or loss from the sale of assets, dividends on stock, and patronage refunds from other cooperatives.

**Gross income** - The dollar value of gross margins plus other operating income and nonoperating income.

**Total expenses** - The dollar value of labor, administrative, and other general expenses, such as depreciation, repairs, utilities, and property taxes.

**Labor expense** - The dollar value of salaries and wages and fringe benefits, including social security, workers' compensation, unemployment, retirement, hospitalization, bonuses, and other expenses directly related to labor.

**Net savings (losses)** - The dollar value of gross income minus total expenses before income taxes.

**Allocation of net savings** - The dollar value of the net savings (1) paid in cash as patronage refunds, (2) paid in cash as dividends or interest on stock, (3) allocated to patrons on the book, (4) retained as equity/unallocated retained earnings, (5) allocated to an educational fund, and (6) set aside for income taxes (Federal and State).

## Contents

<b>HIGHLIGHTS AND CONCLUSIONS .....</b>	<b>vi</b>
<b>FIRST-HANDLER CHARACTERISTICS .....</b>	<b>1</b>
Storage Capacity .....	1
Grain Volume Marketed and Sales .....	1
Accessibility of Railroads .....	3
<b>FINANCIAL STATEMENTS .....</b>	<b>3</b>
Income Statement .....	3
Balance Sheet .....	5
Equity Capital .....	5
Net Savings .....	7
<b>FINANCIAL STATEMENT ANALYSIS .....</b>	<b>10</b>
<b>COOPERATIVES BY TYPES OF GRAINS HANDLED .....</b>	<b>12</b>
Key Characteristics of Types .....	12
Income Statement .....	13
Balance Sheet .....	13
Financial Statement Analysis .....	14
<b>HOW DOES YOUR ASSOCIATION COMPARE? .....</b>	<b>17</b>
Your Cooperative .....	17
<b>OTHER PUBLICATIONS AVAILABLE .....</b>	<b>17</b>
<b>APPENDIX A .....</b>	<b>18</b>

## Highlights And Conclusions

This report presents information on the physical and financial structure of 895 local first-handlers-of-grain associations with total sales of at least \$1 million in 1983-84. Analysis of records for their 1983-84 operations revealed the following:

- Grain and farm supplies sales averaged more than \$10.5 million per association. Grain sales accounted for 78 percent of total sales overall, ranging from 72 percent for wheat-sorghum (Southern Plains) cooperatives to more than 91 percent for wheat-barley (Pacific Northwest) cooperatives.
- Aggregate net savings before income taxes and allocations totaled \$161.6 million, or \$180,598 per association. Net savings for those with savings for the year averaged \$236,383. Sixteen percent had net operating losses, averaging \$112,765 each.
- Wheat-sorghum and wheat-barley associations had substantially higher net savings than corn-soybean (Corn Belt) and wheat-barley-oats (Northern Plains) associations of comparable size.
- Patronage received from other cooperatives amounted to nearly 14 percent of net savings for all associations, and was a significantly more important component of net savings for wheat-sorghum and corn-soybean cooperatives than for the wheat-barley-oats and wheat-barley cooperatives.
- Patronage allocations to user-members accounted for about 58 percent of net savings, of which 36 percent was paid in cash. The proportion of net savings declared as patronage varied greatly among types of cooperatives.
- Total grain storage capacity per association was 1,612,769 bushels; grain marketings averaged 2,368,357 bushels. The relationship between grain marketings and storage capacity—turnover rate—varied significantly by size (sales group) and type of cooperative.
- Gross income generated per dollar of total expenses varied significantly among cooperative types of comparable size.
- Labor and related expenses comprised 41 percent of total operating expenses, and ranged from 37 percent for medium- and large-sized wheat-barley cooperatives to 45 percent for large wheat-barley-oats cooperatives.
- Total value of assets ranged from about \$1 million per association for the small ones of each type to about \$12 million for the large wheat-sorghum and wheat-barley-oats cooperatives.
- Current assets accounted for 46 percent of total assets; fixed assets, 35 percent; investments and other miscellaneous items, the remaining 19 percent. All three percentages varied little among sales groups but varied considerably among types of cooperative.
- Equity capital of these first-handlers averaged \$2,006,548 per association and was equivalent to nearly 54 percent of total assets. Equity as a proportion of total assets varied among cooperative types and declined with an increase in cooperative size.
- Total debt as a percent of member equity and of total assets was about double for associations reporting losses as it was for those with net savings. Both ratios and many other relationships varied significantly among cooperative sales groups and types.

Substantial change has taken place over time in the financial structure of cooperatives that are first-handlers of grain—How does yours compare with others for 1983-84? See appendix A for format.



Grain-handling cooperatives in the late 1970's and early 1980's are and continue to be characterized by accelerated growth, diversification, consolidation, modernization, and retrenchment, all of which have important financial implications.

If grain-handling cooperatives are to adjust successfully to changing economic conditions, they must first command the necessary capital. Grain-handling cooperatives finance their operations through standard procedures used by other businesses in addition to those unique to cooperatives, such as revolving funds. Financing is through producer-members, local banks, Banks for Cooperatives, and other financial institutions and, in some cases, the investing public.

In the past, many of the grain-handling cooperatives were small associations struggling to better the economic conditions of farmers through cooperative action. They furnished much of the capital needed to operate their associations themselves. Over the years, many have continued to follow this and other traditional and sometimes restrictive patterns of financing their operations. However, grain-handling cooperatives discovered that they could not expand their operations solely on internal, or equity, financing. Many found it necessary to borrow capital to meet their increasing financial needs and realize economies of scale.

New approaches are needed if cooperatives are to continue to grow and be economically sound. Adequate financing and sound financial management are critical. Financial management is probably the most important and complex managerial activity in the operation of grain-handling cooperatives today. Determining capital needs and establishing priorities are critical areas in decisionmaking. Financial planning by grain-handling cooperatives should include (1) the generation of more permanent capital to replace or supplement revolving types of capital, (2) equitable membership participation in financing, and (3) maximizing financial leverage if used.

Type of cooperative	Co-op size	Current ratio	Debt/assets ratio	Debt/equity ratio	Net savings/equity	Proportion assns. with net savings
					<i>Percent</i>	<i>Percent</i>
Corn-soybean (Corn Belt)	Small	1.56	.26	.43	6.78	49.1
	Medium	1.47	.25	.44	8.37	84.2
	Large	1.30	.32	.66	7.68	86.9
Wheat-sorghum (Southern Plains)	Small	1.75	.23	.35	7.22	83.5
	Medium	1.59	.23	.36	9.00	84.3
	Large	1.35	.23	.41	11.68	93.3
Wheat-barley-oats (Northern Plains)	Small	1.49	.08	.14	9.58	86.9
	Medium	1.27	.12	.25	9.56	95.8
	Large	1.11	.08	.25	8.50	100.0
Wheat-barley (Pacific Northwest)	Small	2.03	.23	.33	6.93	100.0
	Medium	1.77	.17	.25	13.54	100.0
	Large	1.27	.26	.49	16.42	100.0



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### FIRST-HANDLER CHARACTERISTICS

This study presents information on the financial structure and related operating characteristics of cooperatives that are first-handlers of grain (referred to hereafter as first-handlers, grain cooperatives, or associations) with sales of at least \$1 million in 1983-84, of which more than 50 percent was from sales of grain. Most of these cooperatives were diversified, handling farm supplies and providing many related services.

The 895 grain cooperatives in this study averaged 834 members per association in 1983-84. Individual association membership ranged from 22 to 8,300. Grain producers accounted for an increasing percentage of total membership as size increased (table 1). Eighteen percent of the grain cooperative associations had only grain producers as members.

**Table 1—Membership composition, by sales group**

Sales group (million dollars)	Membership	
	Average	Grain producers
	Number	Percent
1.0-4.9	415	59.7
5.0-14.9	689	65.2
15.0 or more	1,946	69.1

Note: Data for sales groups are for 1984 for the smallest group; 1983 for the other two.

### Storage Capacity

The 895 grain cooperatives reported an estimated 1.4 billion bushels of total grain storage capacity. This represented 18 percent of total U.S. off-farm storage capacity in 1983-84. Grain storage capacity ranged from 26,800 to more than 27 million bushels and averaged 1,612,769 bushels per association. The turnover rate (grain marketed volume/storage capacity) varied inversely with grain storage capacity for each sales group and averaged highest for the largest sales group (table 2). A high-storage utilization rate is important to maintaining a profitable business, particularly among those with smaller storage capacities. A low turnover rate generally requires a higher per-bushel margin to cover the cost of operations.

### Grain Volume Marketed and Sales

The local grain cooperative associations studied marketed 2.1 billion bushels of grain during the 1983-84 crop year. Individual association volumes marketed ranged from 200,000 to 24.4 million bushels and averaged 2,368,357 bushels. Sales group averages ranged from about 742,000 bushels for the smallest cooperatives to more than 6 million bushels per association for the largest ones (table 2).

**Table 2—Grain storage capacity, marketed, and sales, by sales group**

Sales group (million dollars)	Elevator storage capacity		Locations per association	Grain mar- keted per association	Turn - over rate	Proportion grain of total sales
	Per association	Per location				
	-----Bushels-----		Number	Bushels	Times	Percent
1.0-4.9	558,089	495,382	1.1	741,759	1.33	79.5
5.0-14.9	1,384,579	830,087	1.7	1,988,036	1.44	77.9
15.0 or more	3,965,919	947,176	4.2	6,089,683	1.54	77.6

**Table 3—Grain marketed, total and per association, by type of grain and sales group**

Item and sales group (million dollars)	Wheat	Corn	Soybeans	Milo	Barley	Other	Total
<i>-----Bushels-----</i>							
Grain marketed:							
Total:							
1.0-4.9	84,900,277	31,851,204	13,590,499	19,032,987	10,056,258	16,365,542	175,796,767
5.0-14.9	261,744,679	434,165,751	167,288,289	59,232,328	35,023,781	42,527,158	999,981,986
15.0 or more	182,193,546	486,480,790	187,638,612	33,116,443	27,141,629	27,329,867	943,900,887
Per association:							
1.0-4.9	358,229	134,393	57,344	80,308	42,432	69,053	741,759
5.0-14.9	520,367	863,153	332,581	117,758	69,630	84,547	1,988,036
15.0 or more	1,175,442	3,138,586	1,210,572	213,654	175,107	176,322	6,089,683
<i>-----Percent-----</i>							
Proportion of associations marketing:							
1.0-4.9	89	68	52	37	40	74	—
5.0-14.9	78	88	80	30	24	82	—
15.0 or more	79	96	88	24	21	84	—
Distribution of marketings:							
1.0-4.9	48	18	8	11	6	9	100
5.0-14.9	26	43	17	6	4	4	100
15.0 or more	19	52	20	3	3	3	100

**Table 4—Railroads serving headquarters locations and storage capacity of associations, by sales group**

Railroad(s)	Headquarters						Distribution of associations' storage capacity		
	Locations served			Distribution			Sales group (million dollars)		
	Sales group (million dollars)			Sales group (million dollars)			Sales group (million dollars)		
	1.0-4.9	5.0-14.9	15.0 or more	1.0-4.9	5.0-14.9	15.0 or more	1.0-4.9	5.0-14.9	15.0 or more
<i>-----Number-----</i>				<i>-----Percent-----</i>					
Burlington Northern	85	103	25	35.9	20.5	16.1	31.5	18.7	14.3
Chicago and Northwestern	8	65	24	3.4	12.9	15.5	3.1	12.2	21.4
Santa Fe <sup>1</sup>	23	43	12	9.7	8.5	7.7	13.8	14.1	12.1
Union Pacific	18	46	9	7.6	9.1	5.8	8.8	13.4	6.0
Soo Line	12	30	12	5.1	5.9	7.7	2.4	3.1	4.9
Illinois Central Gulf	1	29	9	.4	5.8	5.8	.2	5.4	4.6
Norfolk Southern <sup>2</sup>	3	16	9	1.3	3.2	5.8	1.0	2.5	5.9
Iowa Northern	0	11	0	—	2.2	—	—	1.7	—
Chessie	2	14	4	.8	2.9	2.6	0.5	1.6	2.1
Conrail <sup>3</sup>	2	9	6	.8	1.8	3.9	0.3	1.4	2.1
Other single rail lines	16	33	11	6.8	6.5	7.1	7.8	6.8	9.4
Multiple rail lines	11	23	9	4.6	4.6	5.8	5.3	5.7	6.4
Not on rail line	56	81	25	23.6	16.1	16.2	25.3	13.4	10.8
All associations	237	503	155	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup> Includes Atchison, Topeka, and Santa Fe.

<sup>2</sup> Includes Norfolk and Western.

<sup>3</sup> In process of being sold.



Wheat accounted for 48 percent of total grain volume marketed by the \$1 million to \$4.9 million sales group (table 3). Corn was the principal grain handled by the medium and large cooperatives (table 3).

### Accessibility of Railroads

The abandonment of many of the rail lines that have been used by elevators for years to move grain to market has eliminated this shipping alternative for a substantial number of local first-handlers. Although 18 percent of the associations' headquarters were not located on a rail line,

they often had access to rail lines at one or more of their branch locations. Railroads serving the headquarters of these cooperative associations in 1983-84 are shown in table 4.

### FINANCIAL STATEMENTS

The operating or income statement summarizes a business operation for a specified time period, showing the sources of income, the nature of expenses, and the net savings or loss from operations. The balance sheet is a summary record of transactions during a period of time that indicates the organization's financial health.

**Table 5—Total and grain sales, by sales group**

Sales group (million dollars)	Total sales per association	Grain sales	
		Per association	Proportion of total sales
		Dollars	Percent
1.0-4.9	3,254,401	2,587,964	79.5
5.0-14.9	8,700,144	6,773,973	77.9
15.0 or more	27,575,664	21,409,211	77.6

### Income Statement

Sales of grain and farm supplies totaled more than \$9.4 billion. They ranged from \$3,254,401 to \$27,575,664 per association (table 5). Grain as a proportion of total sales was about the same for all three sales groups.

**Table 6—Income and expenses per association and allocation of net savings, by sales group**

Item	Sales group (million dollars)					
	1.0-4.9	5.0-14.9	15.0 or more	1.0-4.9	5.0-14.9	15.0 or more
	Dollars			Percent		
Income:						
Operating:						
Margins on sales	186,038	526,565	1,733,701	56	56	60
Other (service)	146,019	397,161	1,104,066	44	42	38
Total	332,057	923,726	2,837,767			
Nonoperating:						
Patronage refunds	9,872	23,178	57,506	(1)	2	2
Other	(8,850)	(37,819)	(163,526)	(1)	—	—
Total	1,022	(14,641)	(106,020)			
Gross income <sup>2</sup>	333,079	909,085	2,731,747	100	100	100
Expenses:						
Labor	127,491	308,947	917,943	43	42	40
All other	167,316	432,171	1,374,597	57	58	60
Total	294,807	741,118	2,292,540	100	100	100
Net savings before taxes <sup>3</sup>	38,272	167,967	439,207	—	—	—
Distribution of savings:						
Paid in cash	9,808	35,854	106,353	26	21	24
Allocated	18,682	70,977	179,653	49	42	41
Unallocated	9,782	61,136	153,201	25	37	35
Total	38,272	167,967	439,207	100	100	100

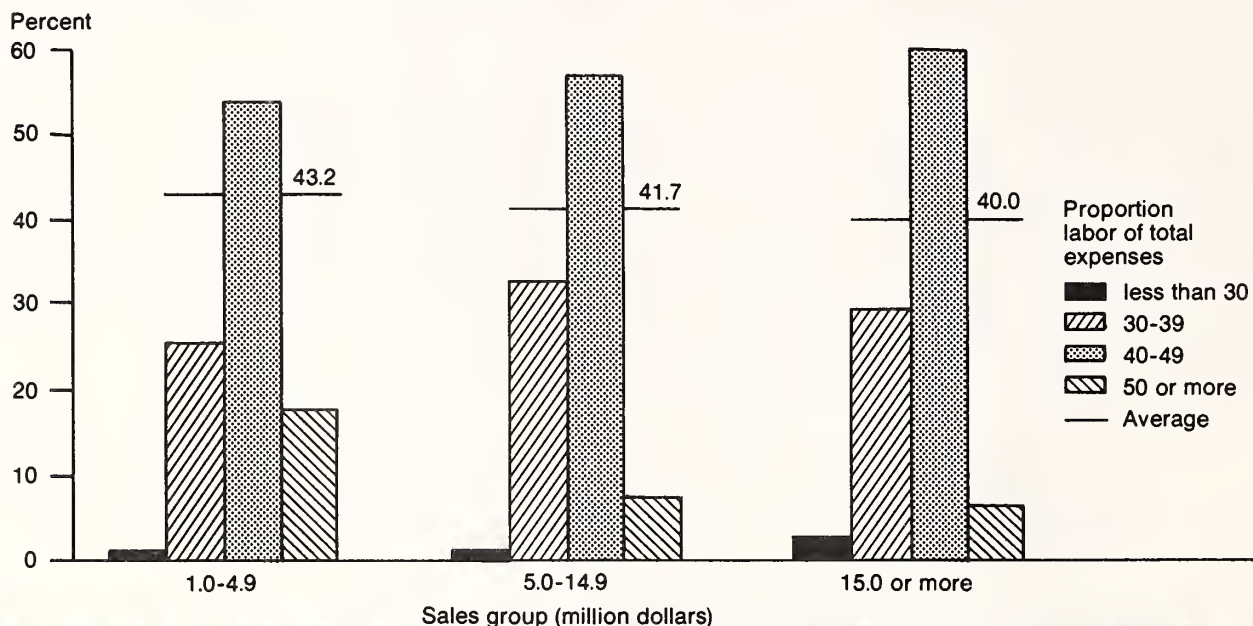
<sup>1</sup> Less than 0.05 percent.

<sup>2</sup> Margins on sales plus other operating income and all nonoperating income.

<sup>3</sup> Savings before income taxes and allocations.



**Figure 1. Distribution of Cooperatives by Proportion Labor of Total Expenses, by Sales Group**



**Table 7—Balance sheet averages per association, by sales group**

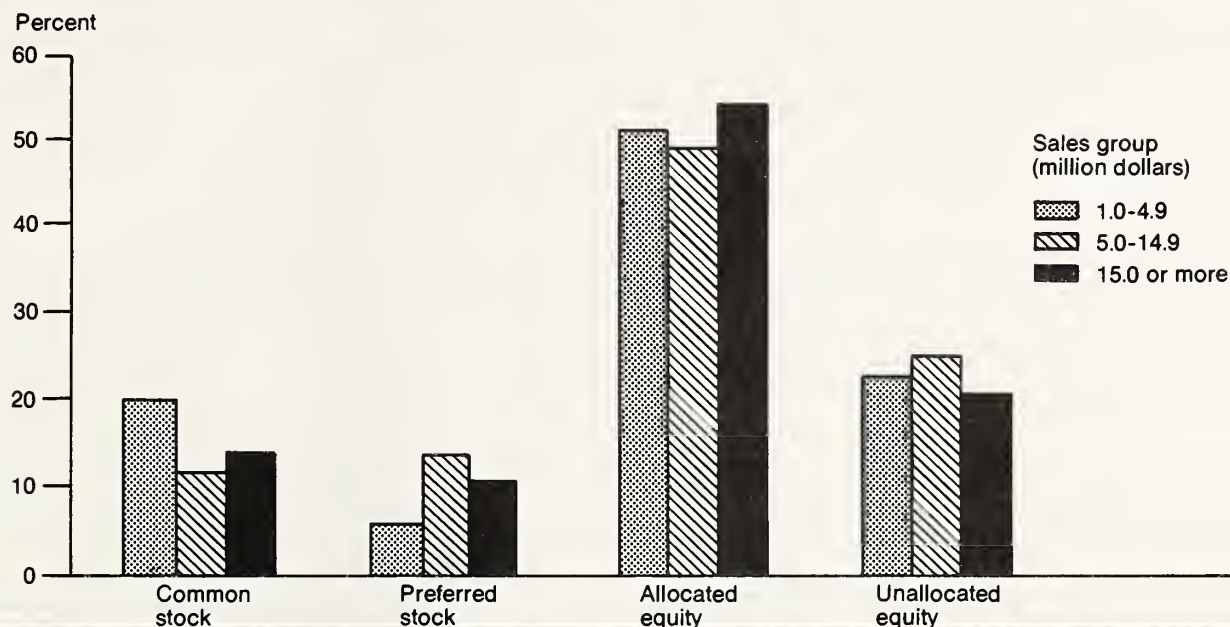
Item	Sales group (million dollars)					
	1.0-4.9	5.0-14.9	15.0 or more	1.0-4.9	5.0-14.9	15.0 or more
	Dollars			Percent		
<b>Assets:</b>						
Current assets	524,746	1,386,557	4,472,099	45	44	47
Investments	244,260	610,798	1,676,632	21	19	18
Fixed	381,660	1,116,958	3,289,953	33	36	35
Other	9,992	20,441	45,538	1	1	( <sup>1</sup> )
<b>Total</b>	<b>1,160,658</b>	<b>3,134,754</b>	<b>9,484,222</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Liabilities and member equity:</b>						
Current liabilities	320,079	941,416	3,463,520	27	30	36
Long-term debt	113,036	392,090	1,392,279	10	12	15
Equity	727,543	1,801,248	4,628,423	63	58	49
<b>Total</b>	<b>1,160,658</b>	<b>3,134,754</b>	<b>9,484,222</b>	<b>100</b>	<b>100</b>	<b>100</b>

<sup>1</sup> Less than 0.5 percent.

**Table 8—Types and amounts of member equity capital, by sales group**

Sales group (million dollars)	Member equity per association	Percent of member equity represented by			
		Common stock	Preferred stock	Allocated equity	Unallocated equity
	Dollars	Percent			
1.0-4.9	727,543	20	6	51	23
5.0-14.9	1,801,248	12	14	49	25
15.0 or more	4,628,423	14	11	54	21

**Figure 2. Types of Equity Capital Used, by Sales Group**



Gross income of first-handlers ranged from \$333,079 to \$2,731,747 per association in 1983-84. Income was derived from margins on sales, service income, patronage refunds, and other nonoperating income. Sales to generate this income came from grain merchandising and farm supply sales. Margins on these sales accounted for 56 to 60 percent of gross income and other operating (service) income 38 to 44 percent (table 6).

Operating expenses of the first-handlers ranged from \$294,807 to \$2,292,540 per association (table 6). Labor comprised 40 to 43 percent of the total (fig. 1). Net savings before income taxes ranged from \$38,272 to \$439,207 per association. Patronage refunds from other cooperatives, which ranged from \$9,872 to \$57,506 per association, accounted for 26 percent of net savings on the small cooperatives. The proportion was significantly smaller on the medium (14) and large (13) associations.

### Balance Sheet

Total value of assets of all first-handlers in 1983-84 was more than \$3.3 billion. Cooperative association assets ranged from about \$1.2 million to nearly \$9.5 million and averaged about \$3.7 million per association (table 7).

The net book value of fixed assets ranged from nearly

\$382,000 to \$3.3 million per association (table 7).

Current assets were 44 to 47 percent of total assets; fixed assets, 33 to 36 percent; investments, mostly in other cooperatives, 18 to 21 percent; and other assets, less than 1 percent. Member ownership (equity) declined significantly with an increase in association size as a proportion of total liabilities plus member equity, averaging 49 percent on the large cooperatives compared with 63 percent on the small ones. The reverse side of the coin is that total liabilities (current and long-term) ranged from 37 to 51 percent.

### Equity Capital

Equity capital provides the element of ownership and control that cooperatives must have to operate and grow. Equity capital also serves as a buffer for creditors to absorb operating losses as well as declines in asset values.

Total equity capital of the first-handlers at the close of 1983-84 amounted to nearly \$1.8 billion, and averaged about \$727,500 per association for small ones to more than \$4.6 million for large ones, or \$1,754 to \$2,616 per member, respectively (table 8).

The types of equity capital reported by the grain cooperatives at the close of 1983-84 and their relative importance are shown in table 8 and figure 2.

Equity is provided by patrons and others in several ways, including the purchase of capital stock or other paper, the investing of a portion of patronage refunds, or the contribution of capital through deductions from sales proceeds in the form of per-unit retains.

Two or all of these methods are commonly used by an individual cooperative.

Common stock (12 to 20 percent of total equity capital) is generally used as voting or membership stock by grain cooperatives. Limitations on ownership, transfer, surrender, cancellation, or voting, are usually included in the articles of incorporation and printed on the voting stock certificates. This is because ownership and control must remain with the members if an association is to qualify as a farmer cooperative under the Capper-Volstead Act and various State laws.

**Table 9—Income sources, total expenses, and net savings per association, by sales group**

Sales group (million dollars)	Income source			Gross income	Total expenses	Net savings ( <sup>1</sup> )	Gross income per dollar expenses
	Margins on sales	Patronage refunds received	All other				
	<i>Dollars</i>						
1.0-4.9	186,038	9,872	137,169	333,079	294,807	38,272	1.13
5.0-14.9	526,565	23,178	359,342	909,085	741,118	167,967	1.23
15.0 or more	1,733,701	57,506	940,540	2,731,747	2,292,540	439,207	1.19

<sup>1</sup> Savings before income taxes and allocations.

**Table 10—Net savings allocations, by sales group**

Sales group (million dollars)	Net savings ( <sup>1</sup> )	Distribution of net savings				Unallo- cated reserves
		Patronage			Other <sup>2</sup>	
		Paid in cash	Retained	Total		
	<i>Dollars</i>	<i>Percent</i>				
1.0-4.9	38,272	34	66	71.0	3.4	25.6
5.0-14.9	167,967	34	66	57.5	6.1	36.4
15.0 or more	439,207	39	61	57.6	7.5	34.9

<sup>1</sup> Savings before income taxes and allocations.

<sup>2</sup> Includes dividends/interest on equity capital, an educational provision, and Federal and State income taxes.

**Table 11—Total sales, gross income, net savings, and expenses per association, by sales group**

Sales group (million dollars)	Total sales	Proportion grain of total sales	Gross income	Total operating income of gross income <sup>1</sup>	Total expenses	Net savings ( <sup>2</sup> )
	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	
1.0-4.9	3,254,401	79.5	333,079	99.7	294,807	38,272
5.0-14.9	8,700,144	77.9	909,085	101.6	741,118	167,967
15.0 or more	27,575,664	77.6	2,731,747	103.9	2,292,540	439,207

<sup>1</sup> Total operating income is margins on sales plus other operating income.

<sup>2</sup> Savings before income taxes and allocations.

**Table 12—Selected sources of gross income per association, by sales group**

Sales group (million dollars)	Margins on sales	Patronage refunds received	All other sources ( <sup>1</sup> )	Gross income	Margins on sales	Patronage refunds received	All other sources
	<i>Dollars</i>				<i>Percent</i>		
1.0-4.9	186,038	9,872	137,169	333,079	56	3	41
5.0-14.9	526,565	23,178	359,342	909,085	58	2	40
15.0 or more	1,733,701	57,506	940,540	2,731,747	64	2	34

<sup>1</sup> Includes operating and nonoperating income.



Allocated capital credits accounted for about 50 percent of total equity capital; unallocated reserves and stock each accounted for about one-fourth of total member equity (table 8).

## Net Savings

Net savings figures in this report do not reflect all actual savings and value of services provided to members by the grain cooperatives. Many are buy-and-sell type cooperatives. Most grain cooperatives attempt to provide services close to actual cost so monies to be allocated at the end of the operating year are relatively small.

Grain cooperatives involved in handling grain and farm supplies may realize a net savings from one activity and incur a net loss from the other. These savings and losses are not handled uniformly by all multifunction cooperatives as their bylaws generally differ on the matter. Because a cooperative is a single business entity with generally the same members participating in all functions, the results (net savings or loss) for the operating year typically are reported for the total business.

Federal income tax laws stipulate that the portion of a cooperative's net savings distributed as patronage refunds is currently deductible before figuring income taxes. At least 20 percent of total patronage refunds must be paid in cash. Their payment has long been a trademark of local

first-handlers of grain.

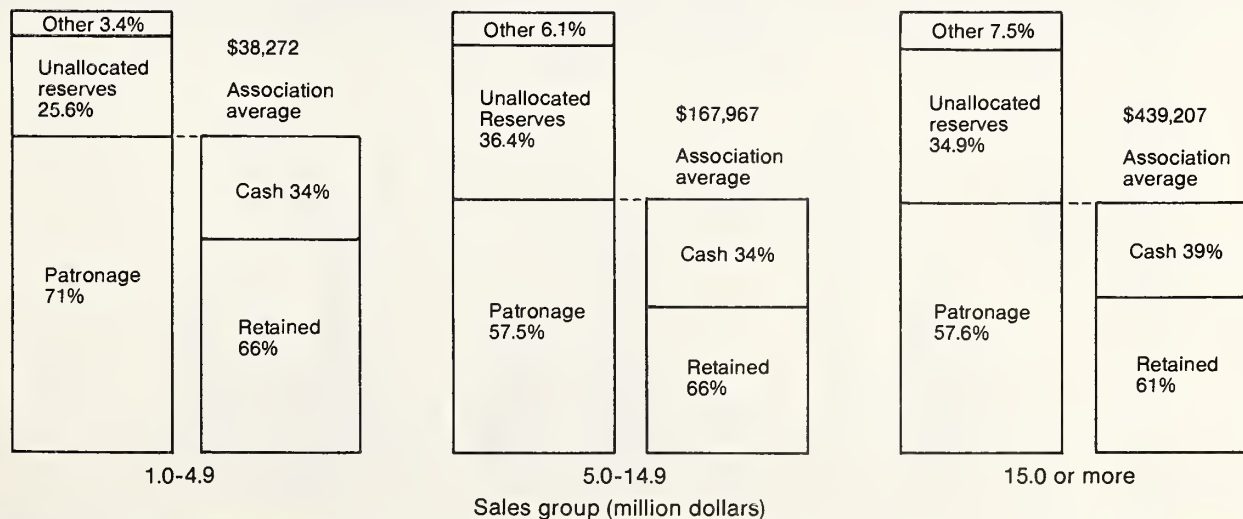
At the close of 1983-84, aggregate net savings before income taxes and allocations was nearly \$162 million, and ranged from \$38,272 per association for small cooperatives to \$439,207 for large ones (table 9). Of this, \$139 million was operating savings and \$23 million was patronage refunds received from other cooperatives. Net savings per association member averaged about \$217.

Table 10 and figure 3 show how first-handlers allocated net savings. Seventy-one percent of net savings was patronage refunds for the small associations compared with nearly 58 percent for the other two sales groups. At least 34 percent was paid out as cash. About 5 percent was used to pay income taxes for 1983-84.

Aggregate net savings after taxes amounted to more than \$154 million, with nearly \$23 million received as patronage refunds from other cooperatives. Net savings after taxes averaged about \$172,122 per association, of which \$25,599 was patronage refunds from other cooperatives. The latter represented from 13 percent of net savings before taxes on large cooperatives to nearly 26 percent on the small ones.

Table 11 shows the grain cooperatives' incomes and expenses by association sales group while table 12 shows the sources of income.

**Figure 3. Distribution of Net Savings, by Sales Group**



**Table 13—Operating statement and balance sheet data per association reporting savings and losses, by sales group**

Item	Unit	Associations reporting savings			Associations reporting losses			All associations reporting		
		Sales group (million dollars)			Sales group (million dollars)			Sales group (million dollars)		
		1.0-4.9	5.0-14.9	15.0 or more	1.0-4.9	5.0-14.9	15.0 or more	1.0-4.9	5.0-14.9	15.0 or more
Gross income	Dollars	353,203	924,733	2,745,117	276,276	801,754	2,623,215	333,079	909,085	2,731,747
Total expenses	Dollars	285,409	720,764	2,191,826	321,332	880,736	3,110,102	294,807	741,118	2,292,540
Net savings (loss) <sup>1</sup>	Dollars	67,794	203,969	553,291	(45,056)	(78,982)	(486,887)	38,272	167,967	439,207
Total sales	Dollars	3,312,154	8,717,786	27,299,869	3,091,389	8,579,135	29,814,473	3,254,401	8,700,144	27,595,664
Grain sales	Dollars	2,651,124	6,838,598	21,380,941	2,409,699	6,330,693	21,638,695	2,587,964	6,773,973	21,409,211
Share of total	Percent	80.0	78.4	78.3	77.9	73.8	72.6	79.5	77.9	77.6
Turnover rate	Times	1.33	1.42	1.52	1.31	1.53	1.64	1.33	1.44	1.54
Current assets	Dollars	559,325	1,394,739	4,460,051	427,142	1,330,434	4,569,896	524,746	1,386,557	4,472,099
Investments	Dollars	243,083	596,288	1,596,558	247,580	710,332	2,326,648	244,260	610,798	1,676,632
Fixed assets	Dollars	384,755	1,130,342	3,303,615	372,925	1,025,153	3,179,047	381,660	1,116,958	3,289,953
Other	Dollars	11,848	18,241	45,617	4,754	35,527	44,894	9,992	20,441	45,538
Total assets	Dollars	1,199,011	3,139,610	9,405,841	1,052,401	3,101,446	10,120,485	1,160,658	3,134,754	9,484,222
Current liabilities	Dollars	316,364	903,086	3,371,599	330,564	1,204,339	4,209,705	320,079	941,416	3,463,520
Long-term liabilities	Dollars	105,211	377,165	1,304,955	135,120	494,484	2,101,140	113,036	392,090	1,392,279
Equity	Dollars	777,436	1,859,359	4,729,287	586,717	1,402,643	3,809,640	727,543	1,801,248	4,628,423
Total liabilities and equity	Dollars	1,199,011	3,139,610	9,405,841	1,052,401	3,101,446	10,120,485	1,160,658	3,134,754	9,484,222
Current ratio	—	1.77	1.54	1.32	1.29	1.10	1.09	1.64	1.47	1.29
Member equity	Percent	64.8	59.2	50.3	55.8	45.2	37.6	62.7	57.5	48.8
Net savings (loss) /total assets	Percent	5.65	6.50	5.88	(4.28)	(2.55)	(4.81)	3.30	5.36	4.63

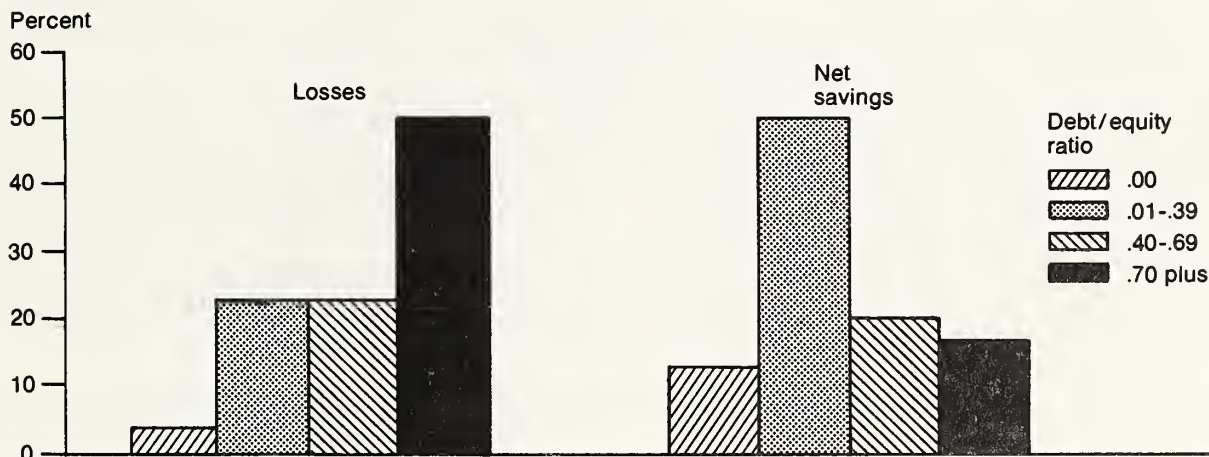
<sup>1</sup> Savings before income taxes and allocations.



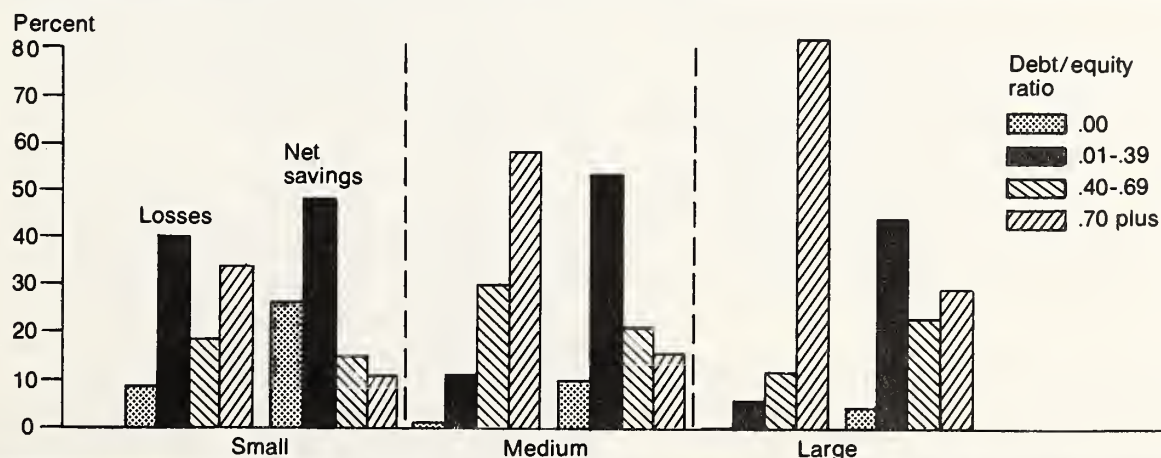
Separate operating statements and balance sheets were developed for the associations reporting net savings and those with losses (16 percent of the total) in 1983-84 (table 13). Net savings for the former group ranged from \$67,794 to \$553,291, compared with losses that ranged from \$45,056 to \$486,887 for the latter group. Gross incomes for associations with net savings ranged from \$353,203 to \$2,745,117 and those with losses ranged from \$276,276 to \$2,623,215. Total expenses per association was about 80 percent of gross income for associations with net savings and ranged from 110 to 119 percent for those reporting losses.

The debt picture is very different for these two groups. Total debt, including the current portion of long-term debt, for the three sales groups averaged 59 to 72 percent higher on cooperatives reporting losses than on those reporting net savings. Total debt was 86 percent of member equity and 38 percent of total assets for all cooperatives reporting losses, while it represented only 42 percent of member equity and was only 23 percent of total assets for all those with net savings. Figures 4 and 5 show the distributions of the respective groups of associations on the basis of debt/equity ratio.

**Figure 4. Distribution of Cooperatives by Debt/Equity Ratio: Co-ops Reported Net Savings, Losses**



**Figure 5. Distribution of Cooperatives by Debt/Equity Ratio: Co-ops Reported Net Savings, Losses, by Sales Group**



The current ratio for cooperatives reporting losses ranged from 1.09 to 1.29 for the three sales groups, compared with 1.32 to 1.77 for those reporting savings (table 13). Member equity for associations with losses ranged from 38 to nearly 56 percent, compared with 50 to 65 percent for those with savings. Cooperative associations have varying policies and agreements with patrons for handling losses. Some charge members directly for their share of the loss based on member patronage during the year, while others charge losses against allocated equity of members and often against unallocated equity.

## FINANCIAL STATEMENT ANALYSIS

Financial and operating ratios offer, with limitations, a means of showing relationships between items in the financial statement of a business operation and are useful tools in helping analyze a cooperative's financial and operating relationships. These ratios can indicate but not solve problems. They are largely descriptive but can serve as guidelines for planning purposes. For ratios to aid meaningfully in formulating actions, management must understand their limitations. This involves not only the type of operation the ratio represents but also the period of time being examined. The situation is further complicated because both items in a ratio are subject to wide variation and there are no fixed standards or hard and fast rules for evaluating or interpreting a ratio.

Financial analysis means selecting the various factors for looking at the cooperative's overall condition. Things to consider are its ability to (1) meet current obligations, (2) earn a satisfactory return on investment, (3) withstand external or internal financial problems, (4) raise capital when needed, and (5) perform efficiently.

In using ratios, management must first determine what it wants to analyze, then select the appropriate ratio(s). Ratios are susceptible to change as conditions change. They must be revised continuously. At best, ratios are approximations and their use is limited because of differences attributed to such factors as type of business (grain, farm supply), time of year closing, different accounting procedures, and utilization of financial resources. Several ratios are worthy of discussion as they relate to the cooperatives in this study.

The *grain turnover ratio* indicates the use efficiency of the available grain elevator storage space. In this study, the grain volume handled by all associations in 1983-84 averaged 1.33 to 1.54 times storage capacity.

The *current ratio* expresses the relationship between current assets and current liabilities and serves as a general measure of liquidity, or of the cooperative's ability to meet current obligations to creditors. It shouldn't be used without analyzing the individual accounts that comprise current assets. However, it is possible to have a favorable current ratio and not be able to meet current debt obligations because of a long accounts receivables collection period and/or slow-moving inventories. This ratio varied significantly with association sales group (table 14). On average, \$1.64 of current assets was available for each dollar of current liabilities on small cooperatives compared with \$1.29 on large ones (fig. 4).

Some ratios can give an indication of balance sheet strength and the claims of the members and debtors on the assets owned by the cooperative.

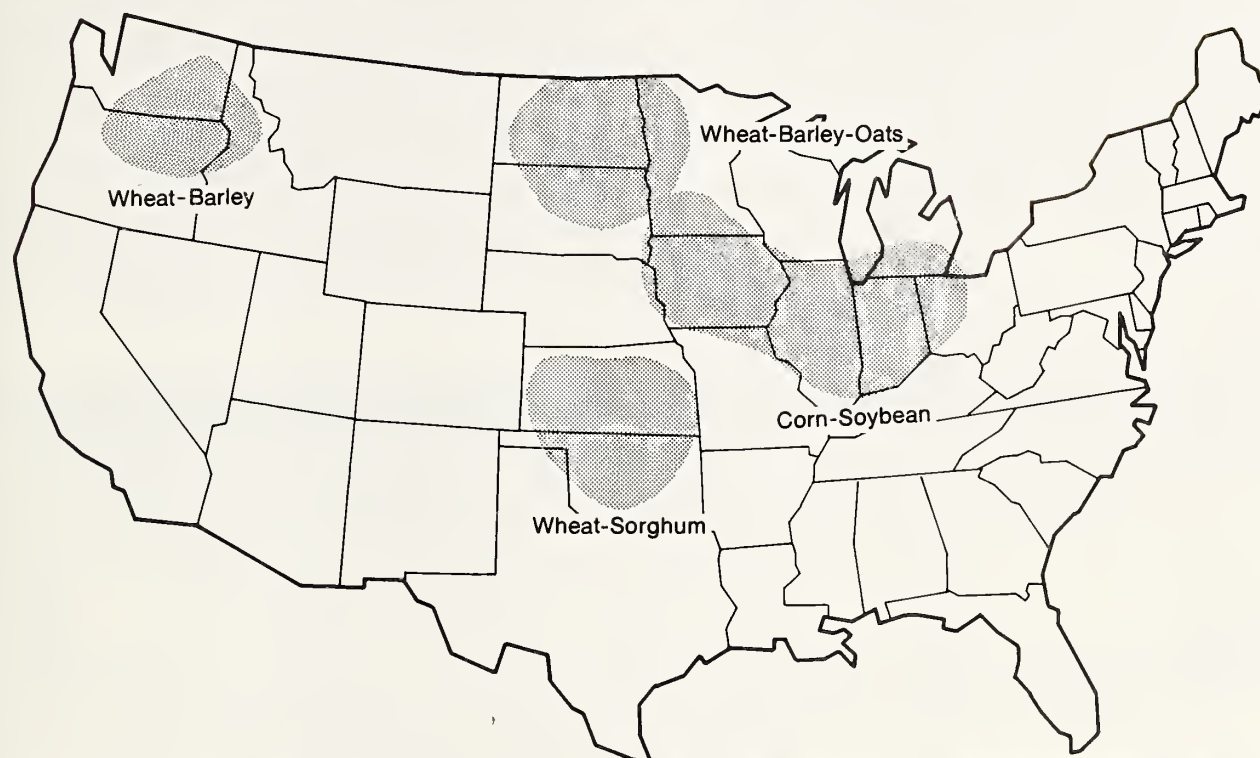
In this study, owners' equity as a percent of total assets averaged highest for the small first-handler associations, at 68 percent. Member equity at 49 percent was sharply lower for the large associations (table 14). Management should also compute and evaluate certain related ratios, like the amount of debt to the amount of money the members have in the cooperative and the dollar value of fixed assets that the debt and member equity support.

The *liabilities/net worth (equity)* ratio indicates the amount of money the members owe creditors in relation to the amount of money invested by members. This relationship increased significantly with an increase in association size, with total liabilities actually exceeding member equity for the large cooperatives. If long-term liabilities are a major part of total liabilities, the ratio may be greater because management has a longer timespan during which to solve any financial problems. Such is not likely in this case, as the proportion of total liabilities represented by long-term debt ranged narrowly from 26.1 to 29.4 percent.

The *net savings/equity* ratio is most commonly used to measure return on member investment. Net savings as a percent of equity averaged about the same for medium and large associations, but was considerably less for the small cooperatives. This means that, on average, member patrons of medium and large cooperatives earned 9.33 to 9.49 cents for each dollar they had invested in the cooperative compared with only 5.26 cents for the small ones. The frequency distribution of all grain cooperatives by rate of return is shown in figure 5.



**Figure 6. Location of Selected Types of First-handler Grain Cooperatives**



**Table 14—Selected overall performance measures, by sales group**

Item	Sales group (million dollars)			All cooperatives
	1.0-4.9	5.0-14.9	15.0 or more	
-----Times-----				
Grain turnover rate	1.33	1.44	1.54	1.47
-----Ratio-----				
Current ratio	1.64	1.47	1.29	1.39
Equity/total assets	.68	.57	.49	.54
Total liabilities/total assets	.37	.43	.51	.46
Debt/equity	.30	.40	.58	.46
Total liabilities/equity	.60	.74	1.05	.85
Debt/assets	.19	.23	.28	.25
Total sales/total assets	2.80	2.78	2.91	2.84
-----Percent-----				
Gross margins/total sales	5.72	6.05	6.29	6.13
Net savings/total sales	1.18	1.93	1.59	1.72
Labor expenses/total expenses	43.20	41.70	40.00	41.09
Net savings/equity	5.26	9.33	9.49	9.00
Net savings/total assets	3.30	5.36	4.63	4.87

The return to total assets reflects how efficiently assets are used. It is measured by the number of dollars of net savings/profit earned per dollar of assets used. For the group of cooperatives studied, the returns averaged 3.30 to 5.36 cents per dollar of assets. The frequency distribution of all cooperatives by this rate of return measure is shown in figure 6.

The *debt/equity* ratio shows the amount of short- and long-term debt the cooperative had in relation to the amount of members' money in the cooperative. This ratio varied significantly with association size, from 0.30 for small cooperatives to 0.58 for the larger ones.

## COOPERATIVES BY TYPES OF GRAINS HANDLED      Key Characteristics of Types

Most cooperative associations in this study could be meaningfully grouped on the basis of grains handled—corn-soybean, wheat-sorghum, wheat-barley-oats, and wheat-barley. The corn-soybean cooperatives serve primarily farmers located in the Corn Belt, the wheat-sorghum cooperatives serve largely Southern Plains farmers, the wheat-barley-oats associations provide services to grain farmers in the Northern Plains, and the wheat-barley associations serve Pacific Northwest producers (fig. 6).

Grain storage capacity, marketings, and turnover rate varied significantly among the four types of cooperative associations studied. Wheat-barley cooperatives had the largest grain storage capacities (table 15). Grain storage capacity varied from under 500,000 bushels per cooperative for small corn-soybean and wheat-barley-oats cooperatives to over 7 million bushels for the large wheat-barley associations. Storage capacities were consistently lowest for the Northern Plains (wheat-barley-oats) cooperatives that handled largely small grains. However, their turnover rates were highest and

**Table 15—Selected operating characteristics, by type and sales group of cooperative association**

Item and cooperative type <sup>1</sup>	Sales group (million dollars)		
	1.0-4.9	5.0-14.9	15.0 or more
<i>-----Number-----</i>			
Storage locations:			
Corn-soybean	1.1	1.4	3.4
Wheat-sorghum	1.2	2.2	6.5
Wheat-barley-oats	1.1	1.5	3.7
Wheat-barley	1.3	3.2	12.0
<i>-----Bushels-----</i>			
Storage per location:			
Corn-soybean	435,004	830,951	1,048,008
Wheat-sorghum	621,270	816,204	899,476
Wheat-barley-oats	327,989	395,986	618,115
Wheat-barley	724,125	1,103,276	605,488
Storage capacity:			
Corn-soybean	484,250	1,191,437	3,555,391
Wheat-sorghum	747,097	1,769,969	5,816,614
Wheat-barley-oats	349,496	610,479	2,295,857
Wheat-barley	965,500	3,555,000	7,265,857
Grain marketed:			
Corn-soybean	654,278	2,030,491	5,828,276
Wheat-sorghum	732,288	1,762,481	4,817,412
Wheat-barley-oats	806,012	2,065,546	8,372,166
Wheat-barley	784,506	2,313,292	7,552,196
<i>-----Times-----</i>			
Turnover rate:			
Corn-soybean	1.35	1.70	1.64
Wheat-sorghum	.98	1.00	.83
Wheat-barley-oats	2.31	3.38	3.65
Wheat-barley	.81	.65	1.04

<sup>1</sup>Corn-soybean (Corn Belt), wheat-sorghum (Southern Plains), wheat barley-oats (Northern Plains), wheat-barley (Pacific Northwest).

marketings were second largest. Both the Pacific Northwest and Northern Plains cooperatives are considerably more specialized in grain handling than their counterparts in the Southern Plains and Corn Belt. Grain sales as a proportion of total sales varied significantly among types and ranged from 86 to 97 percent for the Pacific Northwest and Northern Plains cooperatives compared with 66 to 78 percent for the Southern Plains and Corn Belt cooperatives. Grain-producer-only associations accounted for 55 and 38 percent, respectively, of total wheat-barley and wheat-barley-oats cooperatives compared with only 12 and 7 percent, respectively, of the corn-soybean and wheat-grain sorghum cooperatives.

In terms of membership, grain producers as a proportion of total membership varied similarly: wheat-barley, 80 percent; wheat-barley-oats, 74 percent; corn-soybean, 69 percent; and wheat-grain sorghum, 58 percent. With respect to the crops sold that served as the basis for typing the cooperatives, the named crops in each case accounted for at least 91 percent of total grain volume marketed.

### **Income Statement**

Total sales of grain and farm supplies per association was similar for the four types for each sales group, but this is where the similarity ends. The relative contribution of margins to total operating income and margins as a percent of sales varied significantly among association types. Margins as a percent of sales were consistently lowest (2.8-3.9 percent) for wheat-barley cooperatives and highest for the wheat-sorghum first-handlers (6.8-9.1 percent). Its variation is related to the proportion that grain sales is of total sales, with grain margins generally being lower than margins associated with farm supplies sales. Associated with low margins was the larger role played by other sources of operating income—mostly services provided like grain storage, drying, and handling. This was particularly true for the highly specialized wheat-barley associations, characterized by large storage capacities and low turnover rates, where other operating income dollars generated accounted for 57 to 78 percent of total operating income. By contrast, for the wheat-barley-oats cooperatives, that normally are highly dependent on sales generated by smaller storage capacities and high turnover rates for income, nonmargins dollars were 23 to 37 percent of the total. With grain export sales off considerably during the study period (1983/84), the grain storage function becomes a very important to critical income source.

Gross income per association varied significantly among association types for each sales group, varying from a spread of \$215,700 for the small ones to about \$2.5 million for the large ones. Gross incomes were consistently highest and lowest, respectively, for wheat-sorghum and wheat-barley-oats cooperatives, and averaged about the same for the other two types (table 16). This was the pattern for total operating expenses, but not proportionately so. This resulted in a substantially different pattern for net savings (gross income minus operating expenses).

Net savings per association for similar-sized cooperatives varied significantly among types. The spread was from \$98,000 for the small cooperatives (for 1984) to \$450,000 for the large ones (for 1983). Only the small corn-soybean first-handlers lost money (in 1984, table 16), but overall one of every six individual associations, particularly corn-soybean, reported losses.<sup>1</sup> The loss rate for all types collectively varied from 1 of every 9 (11 percent) large associations (1983) to 1 of every 4 (26 percent) small ones (1984).

The loss rates for the individual types varied considerably and ranged from no losses for one type to 1 of every 2 small corn-soybean cooperatives (table 17). The roughly 50 percent of the small corn-soybean associations that showed a loss in 1984 averaged nearly \$60,000 in losses, considerably larger than the average net savings of about \$35,000 for those reporting a net savings. Net savings for wheat-barley and wheat-sorghum associations of comparable size reporting a net savings averaged about the same and were significantly larger than for the comparable corn-soybean and wheat-barley-oats cooperatives.

### **Balance Sheet**

Total value of assets ranged from about \$1 million for 3 of the 4 small cooperative sales group/type associations to \$12.4 million for the large wheat-barley-oats associations (table 16). Net book value of fixed assets as a proportion of total assets was reasonably uniform among sales groups for each association type, and ranged from 25 percent for the wheat-barley-oats (smallest storage capacities and

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<sup>1</sup>Comparable data available for both 1983 and 1984 for the small associations revealed the following about net savings: Statistically the same net savings in both years for both the wheat-sorghum and wheat-barley-oats cooperatives, significantly higher net savings in 1984 for the wheat-barley cooperatives, and significantly larger losses in 1984 (actually a net savings in 1983 to a loss in 1984) for the corn-soybean cooperatives.



**Table 16—Balance sheet and operating statement data per association, by type and sales group**

Item	Unit	Corn-soybean			Wheat-sorghum		
		Sales group (million dollars)			Sales group (million dollars)		
		1.0-4.9	5.0-14.9	15.0 or more	1.0-4.9	5.0-14.9	15.0 or more
Current assets	Percent	44.9	45.0	45.1	39.3	41.3	43.4
Investments	Percent	18.0	19.0	18.5	24.0	23.8	22.1
Fixed assets	Percent	36.4	35.0	36.0	35.9	34.3	34.1
Other	Percent	0.7	1.0	.4	.8	.6	.4
<b>Total assets</b>	<b>Dollars</b>	<b>1,017,373</b>	<b>2,961,080</b>	<b>8,789,052</b>	<b>1,433,915</b>	<b>3,648,094</b>	<b>11,793,300</b>
Current liabilities	Percent	28.8	31.0	34.8	22.5	26.0	32.1
Long-term liabilities	Percent	11.3	13.0	16.7	12.1	11.2	11.4
Equity	Percent	59.9	56.0	48.5	65.4	62.8	56.5
<b>Total liabilities and equity</b>	<b>Dollars</b>	<b>1,017,373</b>	<b>2,961,080</b>	<b>8,789,052</b>	<b>1,433,915</b>	<b>3,648,094</b>	<b>11,793,300</b>
Current ratio	—	1.56	1.47	1.30	1.75	1.59	1.35
Total sales	Dollars	3,552,276	9,109,701	26,688,235	3,250,974	8,352,199	24,445,424
Cost of sales	Dollars	3,358,801	8,583,833	25,009,273	3,029,627	7,715,632	22,224,826
Margins on sales	Dollars	193,475	525,868	1,678,962	221,347	636,567	2,220,598
Patronage refunds received	Dollars	3,723	20,411	60,365	21,803	44,773	96,582
Other income <sup>1</sup>	Dollars	91,400	310,830	827,934	205,209	519,351	1,737,680
Gross income	Dollars	288,598	857,109	2,567,261	448,359	1,200,691	4,054,860
Total expenses	Dollars	301,910	717,618	2,239,521	385,692	994,454	3,277,068
Net savings (loss) <sup>2</sup>	Dollars	(13,312)	139,491	327,740	62,667	206,237	777,792
Gross income per dollar expense	Dollars	0.96	1.19	1.15	1.16	1.21	1.24
Proportion grain of total sales	Percent	77.2	78.4	76.5	74.6	69.0	65.8
Proportion labor of total expenses	Percent	43.6	41.2	39.2	42.5	44.3	43.9
Turnover rate	Times	1.35	1.70	1.64	.98	1.00	.83

highest turnover rates) to nearly 52 percent for the wheat-barley (largest storage capacities and lowest turnover rates). The pattern for current assets was similar to that for fixed assets, and ranged from 37.5 percent for the wheat-barley cooperatives to 59 percent for the wheat-barley-oats ones.

Owners' equity varied significantly among the four types of first-handlers for each sales group, and ranged from 46 percent of total assets for the wheat-barley-oats cooperatives to 61 percent for the wheat-sorghum and wheat-barley ones. Member equity for each type declined with an increase in association size and, overall, ranged from 63 percent for the small associations to 49 percent for the large ones.

## Financial Statement Analysis

Analysis of selected financial and operating ratios or performance indicators constructed for the first-handler associations reveals considerable variation among them by type as well as sales group. These relationships are summarized in table 18.

Grain-handling cooperatives are highly dependent on income generated principally from two sources, margins on sales and grain storage. The turnover rate (volume handled relative to available grain storage) is the key factor in generating margins income where storage capacity, and thus the ability to generate storage income, is limited. This holds particularly true for a period (1983-

**Table 16 (continued)—Balance sheet and operating statement data per association, by type and sales group**

Item	Unit	Wheat-barley-oats			Wheat-barley		
		Sales group (million dollars)			Sales group (million dollars)		
		1.0-4.9	5.0-14.9	15.0 or more	1.0-4.9	5.0-14.9	15.0 or more
Current assets	Percent	54.9	55.6	67.5	30.8	34.2	41.3
Investments	Percent	19.3	15.6	11.0	13.0	8.2	9.9
Fixed assets	Percent	25.0	27.6	21.3	55.8	56.0	46.9
Other	Percent	.8	1.2	.2	.4	1.6	1.9
Total assets	Dollars	1,032,701	2,634,285	12,421,643	981,683	2,996,501	8,407,906
Current liabilities	Percent	36.8	43.6	60.9	15.2	19.3	32.5
Long-term liabilities	Percent	5.7	6.0	6.7	15.1	12.1	13.5
Equity	Percent	57.5	50.4	32.4	69.7	68.6	54.0
Total liabilities and equity	Dollars	1,032,701	2,634,285	12,421,643	981,683	2,996,501	8,407,906
Current ratio	—	1.49	1.27	1.11	2.03	1.77	1.27
Total sales	Dollars	3,081,631	7,558,539	27,289,963	2,673,061	9,420,393	29,949,288
Cost of sales	Dollars	2,933,972	7,163,200	26,084,769	2,596,976	9,052,854	28,812,678
Margins on sales	Dollars	147,659	395,339	1,205,194	76,085	367,539	1,136,610
Patronage refunds received	Dollars	1,936	8,071	21,064	7,457	697	-14,999
Other income <sup>1</sup>	Dollars	83,064	145,635	332,262	246,956	620,149	1,411,808
Gross income	Dollars	232,659	549,045	1,558,520	330,498	988,385	2,533,419
Total expenses	Dollars	191,713	422,205	1,215,795	245,796	709,917	1,788,546
Net savings (loss) <sup>2</sup>	Dollars	40,946	126,840	342,725	84,702	278,468	744,873
Gross income per dollar expense	Dollars	1.21	1.30	1.28	1.34	1.39	1.42
Proportion grain of total sales	Percent	87.8	85.7	91.3	97.0	89.0	90.3
Proportion labor of total expenses	Percent	45.2	42.2	41.7	36.6	36.7	39.2
Turnover rate	Times	2.31	3.38	3.65	.81	.65	1.04

<sup>1</sup> Includes operating and nonoperating income.

<sup>2</sup> Savings before income taxes and allocations.

84) of declining-to-stagnating grain exports coupled with farm programs that reward the storage function. A good example of this is the wheat-sorghum associations with their large storage facilities and low turnover rates.

This is where *grain turnover* becomes a useful grain storage space use efficiency measure. Its importance varies by sales group and type of cooperative association. A comparison of the large wheat-barley-oats and wheat-barley associations provides a good example of this. Both averaged large volumes of grain marketed per cooperative in 1983. The wheat-barley-oats cooperatives accomplished this with storage space that averaged less than one-third that of the wheat-barley associations.

Calculation of the *current* ratio reveals short run liquidity for all sales groups of first-handlers. Closer examination reveals that it varies significantly by association type and clearly declines with increased association size. The variation by type is largely the influence of the wheat-barley-oats associations. Such favorable current ratios can be misleading in terms of the overall financial health of a cooperative or group of cooperatives and should be viewed with caution in the absence of information pertaining to their ability to meet current debt obligations.

The *liabilities/net worth (equity)* ratio, which indicates the amount of money members owe creditors relative to that invested by members, varies significantly among

**Table 17—Proportion of associations reporting losses, average loss, and average net savings, by sales group and type**

Item and cooperative type	Sales group (million dollars)		
	1.0-4.9	5.0-14.9	15.0 or more
	----- Percent -----		
Proportion reporting losses:			
Corn-soybean	50.9	15.8	13.1
Wheat-sorghum	16.5	15.7	6.7
Wheat-barley-oats	13.1	4.2	0
Wheat-barley	0	0	0
	----- Dollars -----		
Average loss per cooperative for those reporting losses:			
Corn-soybean	59,740	84,195	535,142
Wheat-sorghum	44,891	84,871	37,908
Wheat-barley-oats	17,027	16,548	-----
Wheat-barley	-----	-----	-----
Average net savings per cooperative reporting a savings:			
Corn-soybean	34,902	181,494	457,637
Wheat-sorghum	83,853	260,577	836,057
Wheat-barley-oats	49,697	133,074	342,725
Wheat-barley	84,702	278,468	744,873

**Table 18—Selected operating statement and balance sheet relationships, by type and sales group of cooperative**

Item and cooperative type	Sales group (million dollars)		
	1.0-4.9	5.0-14.9	15.0 or more
	----- Dollars -----		
Total sales/total assets:			
Corn-soybean	3.49	3.08	3.04
Wheat-sorghum	2.27	2.29	2.07
Wheat-barley-oats	2.98	2.87	2.20
Wheat-barley	2.72	3.14	3.56
Gross income/total expenses:			
Corn-soybean	1.15	1.19	1.15
Wheat-sorghum	1.17	1.21	1.24
Wheat-barley-oats	1.28	1.30	1.28
Wheat-barley	1.19	1.39	1.42
	----- Percent -----		
Margins/total sales:			
Corn-soybean	5.4	5.8	6.3
Wheat-sorghum	6.8	7.6	9.1
Wheat-barley-oats	4.8	5.2	4.4
Wheat-barley	2.8	3.9	3.8
Net savings/equity:			
Corn-soybean	6.78	8.37	7.68
Wheat-sorghum	7.22	9.00	11.68
Wheat-barley-oats	9.58	9.56	8.50
Wheat-barley	6.93	13.54	16.42
Net savings/total assets:			
Corn-soybean	4.31	4.71	3.73
Wheat-sorghum	4.34	5.65	6.60
Wheat-barley-oats	5.51	4.81	2.76
Wheat-barley	5.00	9.29	8.86
	----- Ratio -----		
Current ratio:			
Corn-soybean	1.56	1.47	1.30
Wheat-sorghum	1.75	1.59	1.35
Wheat-barley-oats	1.49	1.27	1.11
Wheat-barley	2.03	1.77	1.27
Liabilities/net worth (equity):			
Corn-soybean	.57	.78	1.06
Wheat-sorghum	.66	.59	.77
Wheat-barley-oats	.74	.99	2.08
Wheat-barley	.39	.46	.85
Total debt/equity:			
Corn-soybean	.43	.44	.66
Wheat-sorghum	.35	.36	.41
Wheat-barley-oats	.14	.25	.25
Wheat-barley	.33	.25	.49
Total debt/total assets:			
Corn-soybean	.26	.25	.32
Wheat-sorghum	.23	.23	.23
Wheat-barley-oats	.08	.12	.08
Wheat-barley	.23	.17	.26



association types for each sales group. Considering all sales groups, corn-soybean and wheat-barley-oats cooperatives owe creditors about as much as their members have invested whereas the comparable data for the other two types is about 63 cents.

The portion of total liabilities represented by short- and long-term debt also varies considerably among cooperative types. A measure of this variation, the *debt/equity* ratio, reveals that the corn-soybean and wheat-barley-oats associations, respectively, consistently had the largest (smallest) amount of debt capital in relation to the amount of member investment dollars.

Calculation of the *net savings/equity* ratio, the one used most often to measure return on member investment, shows returns on member investment were generally highest for wheat-barley associations and lowest for corn-soybean cooperatives. Except for the wheat-barley-oats first-handlers, returns were clearly lowest for cooperatives with less than \$5 million in total sales.

## HOW DOES YOUR ASSOCIATION COMPARE?

Substantial change has taken place in the financial structure of grain cooperatives since the upsurge in grain sales in the late 1970's. This is the result of operational changes by cooperatives in response to changes occurring in exports, production, transportation, farm programs, financial markets, and the world economic situation in general.

## Your Cooperative

Recognizing that the adjustments made by grain cooperatives result in considerable variation in their physical and financial characteristics, balance sheet and operating data have been prepared for different types and sales groups of cooperative elevators. This information should be beneficial to each cooperative association as a guide in managerial decisionmaking. Appendix A tables provide the sales group averages for the four types of cooperatives.

Managers and directors should be familiar with their cooperatives' profiles and use them as a guide in planning. Appendix A tables provide an outline format to be used in analyzing an operating statement and balance sheet.

## Other Publications Available

Financial Profile of Cooperatives Handling Grain: First-Handlers, \$15 Million Sales or Larger. Francis P. Yager and David E. Cummins, ACS Research Report 53, January 1986.

Financial Profile of Cooperatives Handling Grain: First-Handlers, \$5 Million to \$14.9 Million in Sales. David E. Cummins and Francis P. Yager, ACS Research Report 55, May 1986.

Financial Profile of Cooperatives Handling Grain: First-Handlers, \$1 Million to \$4.9 Million in Sales. Francis P. Yager and David E. Cummins, ACS Research Report 58, January 1987.

Cooperative Involvement in Grain Marketing. David E. Cummins, Francis P. Yager, Charles L. Hunley, Michael D. Kane, and Bruce J. Reynolds, ACS Research Report 38, August 1984.

Marketing and Transportation of Grain by Local Cooperatives. Charles L. Hunley, ACS Research Report 47, March 1985.

Regional Grain Cooperatives, 1980 and 1981. Stanley K. Thurston and David E. Cummins, ACS Research Report 27, April 1983.

# Appendix A

**Appendix table 1—Compare your corn-soybean cooperative with averages for similar cooperative operations**

Group/item	Unit	Sales group (million dollars)			Your cooperative	
		1.0-4.9 (1984 data)	5.0-14.9 (1983 data)	15.0 or more (1983 data)	Today	Future goal
Sales group (check)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Storage capacity	Bushels	484,250	1,191,437	3,555,391		
Grain marketed	Bushels	654,278	2,030,491	5,828,276		
Turnover rate	Times	1.35	1.70	1.64		
Proportion grain	Percent	77.2	78.4	76.5		
Total assets	Dollars	1,017,373	2,961,080	8,789,052		
Long-term debt <sup>1</sup>	Percent	11.3	13.3	16.7		
Member equity <sup>1</sup>	Percent	59.9	56.3	48.5		
Sales	Dollars	3,552,276	9,109,701	26,688,235		
Margins on sales	Dollars	193,475	525,868	1,678,962		
Total expenses	Dollars	301,910	717,618	2,239,521		
Net savings (loss)	Dollars	(13,312)	139,491	327,740		
Labor of total expenses	Percent	43.6	41.2	39.2		
Net savings paid in cash <sup>2</sup>	Percent	40.8	33.1	44.8		
Current ratio	Number	1.56	1.47	1.30		
Debt/assets	Ratio	.26	.25	.32		
Net savings (loss)/total sales	Percent	(.4)	1.5	1.2		
Gross margins/total sales	Percent	5.4	5.8	6.3		

<sup>1</sup> Of total liabilities and member equity.

<sup>2</sup> Of total patronage allocation.

**Appendix table 2—Compare your wheat-sorghum cooperative with averages for similar cooperative operations**

Group/item	Unit	Sales group (million dollars)			Your cooperative	
		1.0-4.9 (1984 data)	5.0-14.9 (1983 data)	15.0 or more (1983 data)	Today	Future goal
Sales group (check)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Storage capacity	Bushels	747,097	1,769,969	5,816,614		
Grain marketed	Bushels	732,288	1,762,481	4,817,412		
Turnover rate	Times	.98	1.00	.83		
Proportion grain	Percent	74.6	69.0	65.8		
Total assets	Dollars	1,433,915	3,648,094	11,793,300		
Long-term debt <sup>1</sup>	Percent	12.1	11.2	11.4		
Member equity <sup>1</sup>	Percent	65.4	62.8	56.5		
Sales	Dollars	3,250,974	8,352,199	24,445,424		
Margins on sales	Dollars	221,347	636,567	2,220,598		
Total expenses	Dollars	385,692	994,454	3,277,068		
Net savings	Dollars	62,667	206,237	777,792		
Labor of total expenses	Percent	42.5	44.3	43.9		
Net savings paid in cash <sup>2</sup>	Percent	31.3	34.7	28.5		
Current ratio	Number	1.75	1.59	1.35		
Debt/assets	Ratio	.23	.23	.23		
Net savings/total sales	Percent	1.9	2.5	3.2		
Gross margins/total sales	Percent	6.8	7.6	9.1		

<sup>1</sup> Of total liabilities and member equity.

<sup>2</sup> Of total patronage allocation.



**Appendix table 3—Compare your wheat-barley cooperative with averages for similar cooperative operations**

Group/item	Unit	Sales group (million dollars)			Your cooperative	
		1.0-4.9 (1984 data)	5.0-14.9 (1983 data)	15.0 or more (1983 data)	Today	Future goal
Sales group (check)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Storage capacity	Bushels	965,500	3,555,000	7,265,857		
Grain marketed	Bushels	784,506	2,313,292	7,552,196		
Turnover rate	Times	.81	.65	1.04		
Proportion grain	Percent	97.0	89.0	90.3		
Total assets	Dollars	981,683	2,996,501	8,407,906		
Long-term debt <sup>1</sup>	Percent	15.1	12.1	13.5		
Member equity <sup>1</sup>	Percent	69.7	68.6	54.0		
Sales	Dollars	2,673,061	9,420,393	29,949,288		
Margins on sales	Dollars	76,085	367,539	1,136,610		
Total expenses	Dollars	245,796	709,917	1,788,546		
Net savings	Dollars	84,702	278,468	744,873		
Labor of total expenses	Percent	36.6	36.7	39.2		
Net savings paid in cash <sup>2</sup>	Percent	22.0	33.0	20.1		
Current ratio	Number	2.03	1.77	1.27		
Debt/assets	Ratio	.23	.17	.26		
Net savings/total sales	Percent	3.2	3.0	2.5		
Gross margins/total sales	Percent	2.8	3.9	3.8		

<sup>1</sup> Of total liabilities and member equity.

<sup>2</sup> Of total patronage allocation.

**Appendix table 4—Compare your wheat-barley-oats cooperative with averages for similar cooperative operations**

Group/item	Unit	Sales group (million dollars)			Your cooperative	
		1.0-4.9 (1984 data)	5.0-14.9 (1983 data)	15.0 or more (1983 data)	Today	Future goal
Sales group (check)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Storage capacity	Bushels	349,496	610,479	2,295,857		
Grain marketed	Bushels	806,012	2,065,546	8,372,166		
Turnover rate	Times	2.31	3.38	3.65		
Proportion grain	Percent	87.8	85.7	91.3		
Total assets	Dollars	1,032,701	2,634,285	12,421,643		
Long-term debt <sup>1</sup>	Percent	5.6	6.0	6.7		
Member equity <sup>1</sup>	Percent	57.5	50.3	32.5		
Sales	Dollars	3,081,631	7,558,539	27,289,963		
Margins on sales	Dollars	147,659	395,339	1,205,194		
Total expenses	Dollars	191,713	422,205	1,215,795		
Net savings	Dollars	40,946	126,840	342,725		
Labor of total expenses	Percent	45.2	42.2	41.7		
Net savings paid in cash <sup>2</sup>	Percent	36.7	32.6	20.2		
Current ratio	Number	1.49	1.27	1.11		
Debt/assets	Ratio	.08	.12	.08		
Net savings/total sales	Percent	1.3	1.7	1.3		
Gross margins/total sales	Percent	4.8	5.2	4.4		

<sup>1</sup> Of total liabilities and member equity.

<sup>2</sup> Of total patronage allocation.

**U.S. Department of Agriculture  
Agricultural Cooperative Service  
Washington, D.C. 20250**

Agricultural Cooperative Service (ACS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

ACS publishes research and educational materials and issues Farmer Cooperatives magazine. All programs and activities are conducted on a nondiscriminatory basis, without regard to race, creed, color, sex, age, handicap, or national origin.